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| 10/785,597 | 02/23/2004 | Adisorn Emongkonchai | 6518P004 | 3223 |

7590 10/04/2007
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| EXAMINER |
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CURS, NATHAN M

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| ART UNIT | PAPER NUMBER |
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2613

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10/04/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

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|------------------------------|--------------------------------------|--|--|
| Office Action Summary | Application No. 10/785,597 | Applicant(s) EMONGKONCHAI, ADISORN | |
| | Examiner Nathan Curs | Art Unit 2613 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 July 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-21 and 24-26 is/are rejected.
- 7) ☒ Claim(s) 22 and 23 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

1. Claim 22, and its dependent claim 23, are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim.

Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. The test as to whether a claim is a proper dependent claim is that it shall include every limitation of the claim from which it depends or in other words that it shall not conceivably be infringed by anything which would not also infringe the basic claim. In this case, claim 22's parent claim, claim 17, contains a plurality of nodes, each of them configured to detect if part of the downstream signal is down and then signal the first terminating (i.e. upstream source) node. However, claim 22 only performs the signaling if the node is a (downstream) terminating node. In other words, claim 22 would require removing the recited signaling from all other nodes besides the downstream terminating node. A dependent claim that omits or replaces a limitation in a parent claim is not a proper dependent claim (see MPEP § 608.01(n) III).

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 1, 9, 17, 25 and 26 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in

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the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claims 1, 9, 17, 25 and 26, as amended, recite that in response to loss of light indicating an LOS, the first terminating node is configured to provision another path to reach the same destination of the first unidirectional path, bypassing at least one node of the first unidirectional path. This is new matter. The original specification doesn't disclose anything about provisioning an alternate path to the destination.

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 22 and 23 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 22 and depending claim 23, claim 22 recites the limitation "the access node ". There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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7. Claims 1-5, 7-13, 16-21 and 24-26 are rejected under 35 U.S.C. 102(a) as being anticipated by ITU-T G.664 ("G.664") (*Optical safety procedures and requirements for optical transport systems*. ITU-T Recommendation 6.664 [online]. International Telecommunication Union, March 2003 [retrieved on 2007-01-18]. Retrieved from the Internet: <URL: <http://www.itu.int/rec/T-REC-G.664/en>>).

Regarding claim 1, G.664 discloses a method performed by a node of a wavelength multiplex optical network, the method comprising: detecting at a node that at least a portion of a first unidirectional path of an optical circuit is down, the first unidirectional path being originated from a first terminating node; and signaling the first terminating node by removing at least a portion of light of a second unidirectional path in an opposite direction of the first unidirectional path of the optical circuit, to indicate a path between the node and the first terminating node is down (fig. 1 and pages 5-7, section "6.2 APR procedures").

Regarding claim 2, G.664 discloses the method of claim 1, wherein the first terminating node is notified of the detection by not receiving at least a portion of the light of the second unidirectional path (fig. 1 and pages 5-7, section "6.2 APR procedures").

Regarding claim 3, G.664 discloses the method of claim 1, wherein the first unidirectional path is detected based on a loss of at least a portion of light of the first unidirectional path (fig. 1 and pages 5-7, section "6.2 APR procedures").

Regarding claim 4, G.664 discloses the method of claim 1, further comprising: detecting a wavelength of the first unidirectional path (first path/wavelength) is down; and signaling the first terminating node via a second path/wavelength of the second unidirectional path with respect to the status of the first path/wavelength (fig. 1 and pages 5-7, section "6.2 APR procedures").

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Regarding claim 5, G.664 discloses the method of claim 4, wherein the first path/wavelength is detected based on a loss of light of the first path/wavelength, and wherein the first terminating node is notified by not receiving the light of the second path/wavelength (fig. 1 and pages 5-7, section "6.2 APR procedures").

Regarding claim 7, G.664 discloses the method of claim 1, wherein the first and second unidirectional paths are within different fibers (fig. 1 and pages 5-7, section "6.2 APR procedures").

Regarding claim 8, G.664 discloses the method of claim 1, wherein the signaling is performed without converting optical signals of the first unidirectional path to electrical signals specifically used to signal the first terminating node that the path between the node and the first terminating node is down (fig. 1 and pages 5-7, section "6.2 APR procedures").

Regarding claim 9, G.664 discloses an apparatus, comprising: a node to be coupled to a wavelength division multiplex optical network, the node including, a detection module to detect that at least a portion of a first unidirectional path of an optical circuit is down, the first unidirectional path being originated from a first terminating node, and a control module coupled to the detection module to signal the first terminating node by removing at least a portion of light of a second unidirectional path in an opposite direction of the first unidirectional path of the optical circuit, to indicate that a path between the node and the first terminating node is down (fig. 1 and pages 5-7, section "6.2 APR procedures").

Regarding claim 10, G.664 discloses the apparatus of claim 9, wherein the first terminating node is notified of the detection by not receiving at least a portion of light of the second unidirectional path (fig. 1 and pages 5-7, section "6.2 APR procedures").

Regarding claim 11, G.664 discloses the apparatus of claim 9, wherein the first unidirectional path is detected based on a loss of at least a portion of light of the first unidirectional path (fig. 1 and pages 5-7, section "6.2 APR procedures").

Regarding claim 12, G.664 discloses the apparatus of claim 9, wherein the detection module detects a wavelength of the first unidirectional path (first path/wavelength) is down, and wherein the control module signals the first terminating node via a second wavelength of the second unidirectional path (second path/wavelength) with respect to the status of the first path/wavelength (fig. 1 and pages 5-7, section "6.2 APR procedures").

Regarding claim 13, G.664 discloses the apparatus of claim 12, wherein the first path/wavelength is detected based on a loss of light of the first path/wavelength, and wherein the first terminating node is notified by not receiving the light of the second path/wavelength (fig. 1 and pages 5-7, section "6.2 APR procedures").

Regarding claim 16, G.664 discloses the apparatus of claim 9, wherein the detection module signals the first terminating node without converting the respective optical signals of the first unidirectional path to electrical signals specifically used to signal the first terminating node that the path between the node and the first terminating node is down (fig. 1 and pages 5-7, section "6.2 APR procedures").

Regarding claim 17, G.664 discloses a wavelength multiplex optical network, comprising: a plurality of nodes interconnected via one or more links, each of the plurality of nodes to detect node that at least a portion of a first unidirectional path of an optical circuit is down, the first unidirectional path being originated from a first terminating node, and signal the first terminating node by removing at least a portion of light of a second unidirectional path in an opposite direction of the first unidirectional path of the optical circuit, to indicate a path between

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the respective node and the first terminating node is down (fig. 1 and pages 5-7, section "6.2 APR procedures").

Regarding claim 18, G.664 discloses the network of claim 17, wherein the first terminating node is notified of the detection by not receiving at least a portion of the light of the second unidirectional path (fig. 1 and pages 5-7, section "6.2 APR procedures").

Regarding claim 19, G.664 discloses the network of claim 17, wherein the first unidirectional path is detected based on a loss of at least a portion of light of the first unidirectional path (fig. 1 and pages 5-7, section "6.2 APR procedures").

Regarding claim 20, G.664 discloses the network of claim 17, wherein the node further detects a wavelength of the first unidirectional path (first path/wavelength) is down, and signals the first terminating node via a second path/wavelength of the second unidirectional path with respect to the status of the first path/wavelength (fig. 1 and pages 5-7, section "6.2 APR procedures").

Regarding claim 21, G.664 discloses the network of claim 20, wherein the first path/wavelength is detected based on a loss of light of the first path/wavelength, and wherein the first terminating node is notified by not receiving the light of the second path/wavelength (fig. 1 and pages 5-7, section "6.2 APR procedures").

Regarding claim 24, G.664 discloses the network of claim 17, wherein the signaling is performed without converting optical signals of the first unidirectional path to electrical signals specifically used to signal the first terminating node that the path between the node and the first terminating node is down. (fig. 1 and pages 5-7, section "6.2 APR procedures").

Regarding claim 25, G.664 discloses a method performed by a node of a wavelength multiplex optical network, the method comprising: detecting at a node that at least a portion of functionality of a wavelength of a first unidirectional path (first path/wavelength) of an optical

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circuit fails to operate, the first unidirectional path being originated from a first terminating node; and signaling the first terminating node by removing the light of a second wavelength a second unidirectional path (second path/wavelength) in an opposite direction of the first unidirectional path of the optical circuit, to indicate the failure of the first path/wavelength (fig. 1 and pages 5-7, section "6.2 APR procedures").

Regarding claim 26, G.664 discloses an apparatus, comprising: a node to be coupled to a wavelength division multiplex optical network, the node including, a detection module to detect that a wavelength of a first unidirectional path (first path/wavelength) of an optical circuit fails to perform, the first unidirectional path being originated from a first terminating node, and a control module coupled to the detection module to signal the first terminating node by removing a light of a second wavelength a second unidirectional path (second path/wavelength) in an opposite direction of the first unidirectional path of the optical circuit, to indicate the first path/wavelength is down (fig. 1 and pages 5-7, section "6.2 APR procedures").

8. Claims 1, 6, 9, 14 and 15 are rejected under 35 U.S.C. 102(b) as being anticipated by Iwaki et al. ("Iwaki") (US Patent Application Publication No. 2002/0024690).

Regarding claim 1, Iwaki discloses a method performed by a node of a wavelength multiplex optical network, the method comprising: detecting at a node that at least a portion of a first unidirectional path of an optical circuit is down, the first unidirectional path being originated from a first terminating node; and signaling the first terminating node by removing at least a portion of light of a second unidirectional path in an opposite direction of the first unidirectional path of the optical circuit, to indicate a path between the node and the first terminating node is down (figs. 25 and 27 and paragraphs 0004-0014 and 0022-0032).

Regarding claim 6, Iwaki discloses the method of claim 1, further comprising: determining whether the node is a terminating node of the optical circuit with respect to the first unidirectional path, wherein the signaling is performed only if the node is a terminating node of the optical circuit (figs. 25 and 27 and paragraphs 0004-0014 and 0022-0032).

Regarding claim 9, Iwaki discloses an apparatus, comprising: a node to be coupled to a wavelength division multiplex optical network, the node including, a detection module to detect that at least a portion of a first unidirectional path of an optical circuit is down, the first unidirectional path being originated from a first terminating node, and a control module coupled to the detection module to signal the first terminating node by removing at least a portion of light of a second unidirectional path in an opposite direction of the first unidirectional path of the optical circuit, to indicate that a path between the node and the first terminating node is down (figs. 25 and 27 and paragraphs 0004-0014 and 0022-0032).

Regarding claim 14, Iwaki discloses the apparatus of claim 9, wherein the control module further determines whether the node is a terminating node of the first unidirectional path of the optical circuit, and wherein the control module signals the first terminating node only if the node is a terminating node of the optical circuit (figs. 25 and 27 and paragraphs 0004-0014 and 0022-0032).

Regarding claim 15, Iwaki discloses the apparatus of claim 14, wherein the first and second unidirectional paths are within different fibers (figs. 25 and 27 and paragraphs 0004-0014 and 0022-0032).

Response to Arguments

9. Applicant's arguments filed 17 July 2007 have been fully considered but they are not persuasive.

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The applicant's arguments are based on the limitations added to the amended independent claims. However, as described above for the rejections under 35 USC § 112-1st paragraph, the original specification doesn't disclose anything about provisioning an alternate path to the destination.

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Conclusion


11. Any inquiry concerning this communication from the examiner should be directed to N. Curs whose telephone number is (571) 272-3028. The examiner can normally be reached on M-F (from 9 AM to 5 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan, can be reached at (571) 272-3022. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300. Any inquiry of

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a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (800) 786-9199.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pairedirect.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



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